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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re application of:

Yang *et al.*

Appl. No. 09/677,574

Filed: October 3, 2000

For: **High Fidelity Polymerases and  
Uses Thereof**

Confirmation No. 1982

Art Unit: 1652

Examiner: Hutson, R.G.

Atty. Docket: 0942.4500004/BJD/MTT

Third Supplemental Information Disclosure Statement

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Third Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Second Supplemental Information Disclosure Statement filed on April 19, 2002, in connection with the above-captioned application. A copy of each document is also provided.

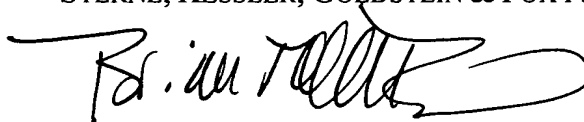
Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered. This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist.

This Third Supplemental Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application. Attached is our Check No. 37330 in the amount of \$ 180.<sup>00</sup> in payment of the fee under 37 C.F.R. § 1.17(p).

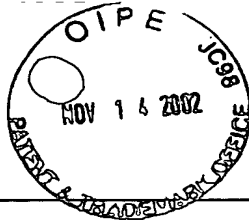
Consideration of the cited documents and making the same of record in the prosecution of the above-identified application is respectfully requested. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,  
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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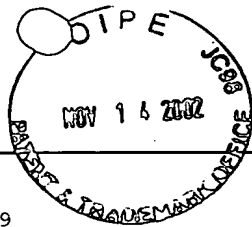
FORM PTO-1449 THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. .0942.4500004/BJD/MTT	APPLICATION NO. 09/677,574
	APPLICANT Yang et al.	
	FILING DATE October 3, 2000	GROUP 1652

U.S. PATENT DOCUMENTS							
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
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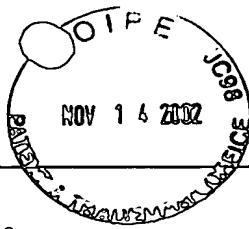
## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>38</u>	Beard, W.A., et al., "Vertical-scanning Mutagenesis of a Critical Tryptophan in the Minor Groove Binding Track of HIV-1 Reverse Transcriptase. Molecular Nature of Polymerase-Nucleic Acid Interactions," <i>J. Biol. Chem.</i> 273:30435-30442, The American Society of Biochemistry and Molecular Biology, Inc. (November 1998)
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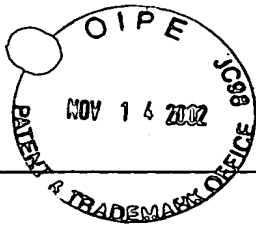
## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	39	Beese, L.S., et al., "Structure of DNA Polymerase I Klenow Fragment Bound to Duplex DNA," <i>Science</i> 260:352-355, American Association for the Advancement of Science (1993)
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	AT	39	Brownstein, M.J., et al., "Modulation of Non-Templated Nucleotide Addition by Tag DNA Polymerase: Primer Modifications that Facilitate Genotyping," <i>Biotechniques</i> 20:1004, 1006, 1008-1010, Eaton Publishing Co. (June 1996)

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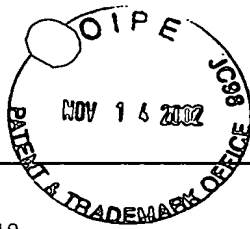
## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>40</u>	Cadwell, R.C., and Joyce, G.F., "Randomization of Genes by PCR Mutagenesis," <i>PCR Meth. Appl.</i> 2:28-33, Cold Spring Harbor Laboratory Press (1992)
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	AT	<u>40</u>	Cline J., et al., "PCR fidelity of <i>Pfu</i> DNA polymerase and other thermostable DNA polymerases," <i>Nucl. Acid Res.</i> 24:3546-3551, Oxford University Press (September 1996)

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## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>41</u>	Doublié, S., et al., "Crystal structure of a bacteriophage T7 DNA replication complex at 2.2 Å resolution," <i>Nature</i> 391:251-258, Macmillan Journals Ltd. (January 1998)
	AS	<u>41</u>	Eom, S.H., et al., "Structure of <i>Taq</i> polymerase with DNA at the polymerase active site," <i>Nature</i> 382:278-281, Macmillan Journals Ltd. (July 1996)
	AT	<u>41</u>	Georgiadis, M.M., et al., "Mechanistic implications from the structure of a catalytic fragment of Moloney murine leukemia virus reverse transcriptase," <i>Structure</i> 3:879-892, Current Biology Ltd. (1995)

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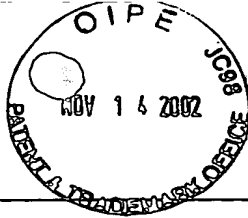
	AR	<u>42</u>	Goodman, M.F., et al., "Biochemical Basis of DNA Replication Fidelity," <i>Crit. Rev. Biochem. Mol. Biol.</i> 28:83-126, CRC Press, Inc. (1993)
	AS	<u>42</u>	Harrison, G.P., et al., "Pausing of reverse transcriptase on retroviral RNA templates is influenced by secondary structures both 5' and 3' of the catalytic site," <i>Nucl. Acids Res.</i> 26:3433-3442, Oxford University Press (July 1998)
	AT	<u>42</u>	Hu, G., "DNA Polymerase-Catalyzed Addition of Nontemplated Extra Nucleotides to the 3' End of a DNA Fragment," <i>DNA Cell Biol.</i> 12:763-770, Mary Ann Liebert, Inc. (1993)

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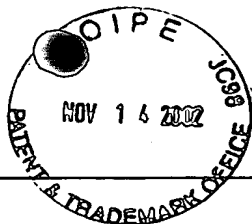
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	AS	<u>43</u>	Joyce, C.M., and Steitz, T.A., "Function and Structure Relationships in DNA Polymerases," <i>Annu. Rev. Biochem.</i> 63:777-822, Annual Reviews, Inc. (1994)
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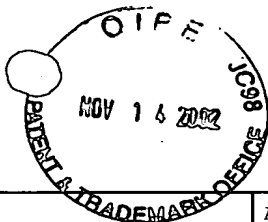
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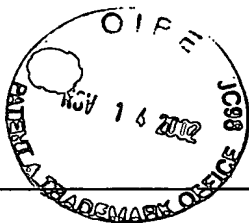
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	AR	<u>45</u>	Lundberg, K.S., <i>et al.</i> , "High-fidelity amplification using a thermostable DNA polymerase isolated from <i>Pyrococcus furiosus</i> ," Gene 108:1-6, Elsevier Science B.V. (1991)
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	AR	46	Yang, S.-W., et al., "Mutant <i>Thermotoga neapolitana</i> DNA polymerase I: altered catalytic properties or non-templated nucleotide addition and incorporation of correct nucleotide," <i>Nucl. Acids Res.</i> 30:4314-4320, Oxford University Press (October 2002)
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